

SERVICE INFORMATION:

**Sleeper Handling Services with the use of Logger Machine
Countrywide for the period of 3 Years.**

CONTENTS

- 1. Definition**
- 2. Description of the works**
- 3. Management and start up**
- 4. Training**
- 5. Construction**
- 6. Standards of workmanship and Accuracy**
- 7. Evaluation of Machine/ Plant Performance**
- 8. Plant and Materials standards and workmanships**
- 9. Testing, Completion, Commissioning and Correction of Defects**

1. DEFINITION

The following definitions shall apply in addition to those of the specification attached.

1.1 Actual Preparation Time (Tp)

Means the period between the arrival of the machinery on site on the day of the operation and the actual commencement of the work by the machinery, plus the period of time between the actual end of the work by the machinery and the actual time when the machinery is secured at its staging point, clear of the occupied area or left parked at its working area if so arranged with the relevant depot. Preparation time excludes all periods of delay by *Employer* as well as the machinery breakdown time from the Contractor

1.2 Annual Holidays

Means the annual holiday with duration of 15 consecutive working days plus statutory public holidays, Saturdays and Sundays that may fall within in this period, when no Work will be performed by the *Contractor*. This period shall normally be from mid-December to mid-January or as per schedule based on work programmed or required.

1.3 Availability(A)

Means when required to do work, a sleeper handling machine is able to produce work to the standards/output specified or required.

1.4 Breakdown Time (Tb)

Means all periods during which the sleeper handling machine is non-available.

1.5 Day

Shall mean a calendar day where a specific number of days is allowed in the Contract for the performance of any act or is stipulated for the extinction of any right or the duration of any event or circumstance the days between the commencement and last day of the Annual Holidays (both days included) and the day from which the period is stated or agreed to commence, shall be excluded from the calculation of the number of days concerned.

1.6 Double Shift Working

Means the working of two consecutive shifts of 8 hours, which may each be non-continuous and scheduled at any times during a 24 hour day.

1.7 Machine

Means the machine or plant provided complete with all fittings, accessories and ancillary equipment including all associated support services such as transportation of the sleeper handling machine from location to location as well as from depot to depot as part of site establishment and dust suppression services such as supplying water cart, and spare parts, as may be required to comply with the requirements of the specifications.

1.8 Production Time (PrT)

Means the total productive time, on a normal working day, when the Contractor is actually loading or offloading sleepers

1.9 Monthly working Time (Twm)

Means the targeted average monthly working time.

1.10 Moving Time (Tm)

Means the period required to move the machinery from work site to work site on the Contractor's own arranged road transportation. Moving time will commence at the announced time of departure and will end when the staging point at the new work site is reached. Periods of overnight stops when the machinery is traveling on the road will be excluded from moving time.

1.11 Night Shift Allowance

Means an allowance paid for any time worked between 18h00 and 06h00 (Night shift allowance is additional to either overtime or normal shift time, if applicable)

1.12 Non-availability

Means when required to do work, the machine or the operation thereof is unsafe, or the machine is not able to produce work as per the scope, due to any reason other than a stoppage of work caused by *Employer*.

1.13 Normal Working Day

A total shift of 8 hours, which may be non-continuous, scheduled at any times during a 24 hour day.

1.14 Normal Shift Working (not exceeding Normal Working Hours)

Shifts (8.0 hours) worked on Saturdays up to Normal Working Hours
Shifts (8.0 hours) worked on Sundays up to Normal Working Hours
Shifts (8.0 hours) worked on Public Paid Holidays up to Normal Working Hours

1.15 Overtime

Means any time worked in excess of the hours of a normal working day and any time worked on Saturdays, Sundays and statutory public holidays.

1.16 Standing Time (Ts)

Means loss of *Working Time* incurred by the *Contractor* due to reasons attributed to the *Employer* excluding *Employer's* preparation time on a daily basis i.e *shunting*.

1.16.1 **Standing Time Rate:** means the rate intended to recover the actual fixed costs, excluding profit, incurred by the Contractor in the event that the Contractor could not execute the services as per the Employer's Work schedule and the event is caused by the Employer.

1.16.2 **Standing Time Payment:** will be limited to the difference between the tendered Working Time (Tw) to achieve the Employer's annual work schedule and the Actual Working Time after the standing time. Allowance in terms of the Service Information was taken into account.

1.16.3 **Standing Time Allowance:** means the time that the Employer allows for the unforeseen disruption in the Working Time. The Employer's Standing Time Allowance will be 2 hours per day, as per item 1.16.4.

1.16.4 **Shunting:** means the movement activity of empty or loaded wagons

1.17 Supervisor's Deputy

Means the person appointed by *Employer* under the control of the Technical Officer from time to time to supervise the operation for the contract, and to supervise the execution of the workload and ensure safe and quality work being done by the *Contractor* and the machine/plant.

1.18 Track

Means and includes plain track, restricted track, sets, splice joints and all joint assemblies.

1.19 Travelling time (Tt)

Means travelling time of the sleeper handling machine between work site and staging point.

1.20 *Works*

Means the *work* to be carried out in terms of the Contract.

1.21 Working time (Tw)

Means the periods during which the sleeper handling machine is actually engaged in the operation or function for which it is provided

1.22 E7/1 - Specification For General Work And Works On, Over, Under Or Adjacent To Railway Lines and Near High Voltage Equipment

1.23 **OEM** refers to the Original Equipment Manufacturer of the machinery.

1.24 **MTM** Maintenance Track Manual

2. DESCRIPTION OF THE WORKS

- 2.1 The contract includes the supply, operation and maintenance of Sleeper Handling Machines at Various Depots prior to, during and after the Sleeper replacement operation as well as during Transnet Infrastructure Manager (TRIM) National Shutdown Program.
- 2.2 This contract shall include the supply of the following; the operation, maintenance and supply of all consumables and the support services and equipment necessary for the execution of the work to full meaning and intent of the contract.
- 2.3 The Affected Property and areas where the services will be executed shall be all railway lines owned and / or maintained by the Employer country wide and in neighbouring countries.
- 2.4 The Contractor will load and offload new and second hand sleepers to meet the production needs as requested by Transnet Infrastructure Manager as per the relevant Sleeper Replacement operation. The Contractor must have certified operators.
- 2.5 The contractor will sort, classify and stack new, second-hand or scrap sleepers once the sleeper replacement operation is completed.
- 2.6 The Contractor's equipment must be available for use on an ad-hoc basis, also anywhere within borders of Republic of South Africa and neighbouring countries
- 2.7 The Service Manager, however reserves the right to deploy the machine wherever it is needed within the borders of Republic of South Africa and neighbouring countries.
- 2.8 More work than planned may be done per depot per machine per year, only if instructed so by the Service Manager and confirmed as allowable within the total value of the contract by the Service Manager.
- 2.9 The contract period shall be thirty six (36) months.
- 2.10 For Standing Time refer to pricing data for payment purposes.
- 2.11 The Contractor may be required to be available during Annual Holidays for emergency work.

3. MANAGEMENT AND START UP

3.1. Management meetings

- 3.1.1. Project management meeting must be conducted once every month for the duration of the contract by the *Service Manager* and *Contractor*. Project progress and programme (revision) must be discussed in these meeting. This meeting shall be for the purpose of discussing machine performance, actual progress versus construction programme, delays, service information, etc.

3.1.2. Operations planning meetings must be done every scheduled day and on Site. The *Contractor*, *Employer* representative (typically the technical Officer) and all other supporting staff of both *Contractor* and *Employer* must be part of these meetings. Safety, risk and environmental matters need to be addressed in these meeting. All these will do prior the operation for that particular scheduled day.

3.1.3. The *Service Manager* may call ad-hoc meetings any time during the contract period.

3.1.4. Technical and Safety audit of the machine and Equipment must be done twice a year, and the report must be send to *Service Manager*.

3.2. Documentation

3.2.1. A complete maintenance manual and spare parts list must be available on the machine.

3.2.2. The *Contractor* shall supply the *Service Manager* with maintenance plans and submit monthly maintenance reports.

3.2.3. A complete operator's instruction manual must be available on the machine.

3.2.4. A complete machine safety and risk file must be available on the machine.

3.2.5. A visitor registration book must be available on the machine.

3.2.6. A Site diary must be available on the machine.

3.3. To be provided by the *Contractor*

3.3.1. Planning of work and emergency standby.

3.3.2. The *Contractor* shall in addition to what is stipulated in this Service Information, provide the following facilities and support for the;

3.3.2.1. Lighting of the Work Site

The *Contractor* shall provide lighting on and with a sleeper handling machine should the sleeper handling machine be required to work at night. This will apply to all workplaces and other work places where work is to be taking place during hours between 18:00 and 06:00. The *Employer* will notify the *Contractor* at least one week prior to lighting arrangements needing to be made. The lighting shall be of intensity and spread to satisfy safe work and efficiency requirements.

3.3.2.2. Support labour and tools:

The *Contractor* or his sub-contractor shall provide all equipment, tools and support required to support the Sleeper Handling machine activity, including the control measurements to control quality.

3.3.2.3. Accommodation

Due to the extent of the site locations, the successful contractor must supply their own; Accommodation, Security of their Sleeper Handling Machine and Plant, water for their Water

Cart, Fuel/Oil for their Sleeper Handling Machine and Plant, Toilets for his personnel and Refreshments for their personnel.

4. TRAINING

- 4.1. Training of *Contractor's* staff and compliance with safety requirements.
- 4.2. The *Contractor* shall ensure that all staff working on or with the contract are adequately qualified and trained, so as to comply with any relevant safety and quality requirements. This applies for both the *Contractors* own staff or any staff of a *Subcontractor* employed by the *Contractor*.
- 4.3. This responsibility of the *Contractor's* to ensure that his staff is qualified and trained implies that:
 - a) Specific graded staff shall be qualified and sufficiently experienced and in possession of a qualified certificate for the required position or responsibility.
 - b) All staff shall also possess any other relevant induction or safety qualifications.
 - c) The *Contractor* shall ensure that a complete up to date record is kept of safety qualifications or training and certification of all staff for all the relevant qualifications and safety requirements.
 - d) The record of the qualifications and or training kept by the *Contractor* shall also be available on site.
 - e) All relevant requirements for refresher training shall be adhered to and the *Contractor* shall ensure that the refresher training and certification required is provided for the relevant staff.
- 4.4. At the commencement of the contract, the *Employer* shall assist the *Contractor* with the initial on-the-job training for the staff as specified below, so as to assist the *Contractor* to qualify the worker's / staff. The assistance for training shall apply only for the types of training listed in the Training Table 1, inserted below.
- 4.5. The *Contractor* shall ensure that all qualifications, training, and certification for all other requirements such as Sleeper Handling Machine Operators, Technicians / Fitters, Drivers, Crane and Earthmoving operators are in place, valid and that record is kept of such qualifications. This implies that the *Contractor* shall ensure that proof of qualifications are kept and provided on request.
- 4.6. Where training is required by the *Contractor* for other than normal track work functions and the *Employer* has undertaken to provide this training, the following shall apply:
 - The number of staff requiring training for a specific qualification or activity is to be provided by the *Contractor* in good time to allow for arranging such training;
 - Training will normally only be provided at an *Employer's* facility;
 - Arrangements for the training and/or testing must be made with the *Service Manager*.

- 4.7. For critical work outputs as well as specific activities, the Contractor shall ensure that he has a core group of workers with sufficient previous experience to take the lead in undertaking maintenance tasks to ensure experience of safe and productive working.
- 4.8. Where any training is provided by the Employer at a depot or centrally at Esselenpark, the Contractor shall be responsible for transport, accommodation and meals. Where the training is provided by the Employer, the lecture hall with facilities and hand-out material will be provided by the Employer.
- 4.9. When training is conducted by a representative of the Contractor, the basic specifications and content of what is required to conduct the training, will be supplied by the Employer. Where the Employer cannot supply duplicate copies of this content, the copies may be duplicated by the Contractor with the approval of the Service Manager. The cost of the copies will then be re-funded to the Contractor after the approval of the invoice.

- 4.10. During the course of the contract any required alternative or follow up or refresher training for new recruits or replacement staff, shall be undertaken by the Contractor as part of the contract responsibility and at the cost of the Contractor.

Table 1 - Training on the Employer's Contracts

Type of Training	Staff required to undergo training	Estimated duration of training	Location of training	Trainer to conduct training at start of contract	Alternative trainer to conduct training at contract start	Future Refreshment training
Induction	All contract staff including new entrants. Start of work at any new depot	+/- 2 hours	Depot where work starts	<i>Employer's Service Manager or Track inspector</i>	New recruits: <i>Contractors</i> accredited representative	<i>Contractors</i> accredited representative
Electrical awareness	All contract staff including new entrants	+/- 2 hours	Depot where work starts	<i>Employer's Depot's electrical officer or accredited trainer</i>	New recruits: <i>Contractors</i> accredited representative	<i>Contractors</i> accredited representative
PWC (Electrical)	<i>Service Managers, Operators, fitters, Technicians & Workers supporting fitters, working in risky OHTE areas.</i>	2 days	Depot where work starts	<i>Employer's, Esselen Park or Depot accredited trainer, or Employer's hired accredited trainer : By appointment at depot*</i>	Replacement/new staff: <i>Contractors</i> accredited representative	<i>Contractors</i> accredited representative
Competency (Electrical)	<i>Service Managers (Follow up training in PWC)</i>	1 day	Depot where work starts	<i>Employer's accredited trainer, or Employer's hired accredited trainer : By appointment at depot*</i>	Replacement/new staff: <i>Contractors</i> accredited representative	<i>Contractors</i> accredited representative

4.11. Electrical awareness, educational and competency training:

The following training shall be arranged for the following Contractors staff:

Table 2- Electrical awareness, educational and competency training:

Course	Objective	Duration & trainer	Grade to attend
A) Awareness (Electrical)	To inform all <i>Contractors</i> staff working near a machine and on the line on electrified sections of the dangerous situations of high voltage OHTE	Two-hour on-the-job lecture and training. Accredited Electrical trainer / Depot's Electrical <i>Service Manager</i> .	<ul style="list-style-type: none"> All workers and staff working on the contract
B) PWC Educational (Electrical)	For the safe working on and with On-track machinery in the vicinity or near exposed High voltage OHTE.	Lecture room training = 1,25 d On-the-job training = 0,25 d Criterion test = 0,5 d Total = 2 days Accredited Electrical trainer	<ul style="list-style-type: none"> Workers working on a machine (High risk area's) Operators Machine fitters Area <i>Service Managers</i> Contract <i>Service Managers</i>
C) COM Competency (Electrical) (to follow A) (PWC)	Work permits safe working procedures under the direct supervision of a responsible representative.	Lecture room training = 0,25 d On-the-job training = 0,25 d Criterion test = 0,50 d Total = 1 day Accredited Electrical trainer	<i>Service Manager</i> (Responsible person in charge at machine working)

b) The electrical awareness training must be arranged for beforehand.

c) The electrical educational and competency training may be arranged for at either a depot's lecture room's (the *Employer's* property), or at a venue of the *Contractors* choice (*Contractors* cost).

d) The Accredited Electrical trainer required at the start of the contract will be provided by the *Employer* at the *Employer's* cost, provided that an arrangement for the training session required is done beforehand and will fit in with the trainers training program for the year. This shall not include transport, accommodation and meals for candidates to be trained.

5. CONSTRUCTION

5.1 Planning of Normal Working

5.1.1 The following will be determined and recorded jointly by the *Service Manager* and the *Contractor* at a monthly site meeting, scheduled to suit both parties:

- a) The previous month's production and quantities for payment purposes.
- b) The next month's detailed programme required.

5.2 Emergency Work Standby during December breaks.

5.2.1 The *Service Manager* shall notify the *Contractor*, one (1) month prior to *Contractor's* Annual Holidays, of the requirement of standby staff for emergency work during *Contractors* Annual Holidays.

5.2.2 When required, the *Contractor* shall supply standby staff (fitter, operator and plant assistant) for emergency work.

5.2.3 The *Contractor* shall supply 2 contact phone numbers for emergency call out purposes (the standby staff shall be available 24 hours a day, 7 days a week)

5.2.4 The call out reaction time shall not exceed 36 hours from time of the call out to the time the machine is at staging point. Consideration must be given in respect of the standby staff getting sufficient rest before commencing work.

5.2.5 The *Contractor* shall make the necessary arrangements for accommodation of standby staff and all costs shall be included in the rates tendered.

5.3 The mutually agreed time the machine shall be available at its staging point shall be the start of the occupation time (To) for that task order, therefore arriving late shall be deemed as breakdown time (Tb).

5.4 During the work activity the productivity, availability and utilization of the machine shall be recorded.

5.4.1 Time shall continuously be recorded for all worked performed.

The following types of time activity shall continuously be recorded so as to clearly define what time is available for working.

To = Shifts (8.0 hours) available per day (up to Normal Working Hours)

Tpr = Total productive time available for the day.

Tw = Net working time, the amount time spent on handling sleepers

Ts = Standing time because of *Employer* reasons, not related to any fault of the *Contractor*.

The contractor shall allow 2 hours for shunting activity which it shall not be deemed as standing time.

Tb = Breakdown of machine

T_{prep} = Total time taken for all shunting activities per shift and contractor preparation activities.

$$T_o = T_{pr} + T_{prep}$$

A productivity factor, **P** shall be calculated every month to continuously monitor whether the machine consistently produces at the rates of production tendered.

The contractor shall provide production rates for wet condition separately

Monitoring of machine availability will be calculated as: Availability (A) = $\frac{T_{pr} - T_b}{T_{pr}}$

Monitoring of machine utilization will be calculated as: Utilization (U) = $\frac{T_w}{T_{pr}}$

Monitoring of machine productivity will be calculated as: Productivity (P) = $\frac{AR}{TR}$

AR = Actual Rate (sleepers/hour)

TR = Tendered Rate (sleepers/hour)

5.5 The tendered nominal production rate in sleepers per hour must be maintained over a calendar month.

5.6 Breakdown time (T_b)

All T_b shall be recorded at all times.

5.7 Where a machine becomes unreliable and continues breaking down and results in insufficient production, the *Service Manager* may decide on placing a machine on breakdown until such time that the *Contractor* can prove that the machine can be consistently available. The machine will always be required to produce the required standard of work required at full production rate.

5.8 Provision of electronic production report to the *Employer*.

5.9 The *Contractor* shall provide the *Employer* with the weekly production statistics of the work. The production report must be e-mailed to the *Service Manager* at 08:00am on the subsequent Monday containing statistics prescribed in excel format by the *Service Manager*, in order to evaluate the performance of the previous week of work.

The production report shall be in an agreed on format providing the following basic type of information:

- a) T_w, T_s, T_b, T_{prep} of each machine applicable.
- b) Number of sleepers handled per day.
- c) Reasons / comments on production shortfall including minutes per reason.
- d) Graphical presentation of data as and where agreed on.

The report shall be e-mailed daily to the *Service Manager*, *Supervisor* and nominated *Employer's* representative.

Where problems exist of actually transmitting the data, the *Contractor* shall state what measures shall be taken to ensure transmission of data as soon as possible.

All data shall be summarised per week and then per month. Data may be used as a preliminary indication of payment but shall not be used specifically for payment purposes.

- 5.10 The Labour, supervision and vehicle, normally required to do the work as required must be listed in the "Schedule of labour and plant for preparation for sleeper handling machine".

6. STANDARDS OF WORKMANSHIP AND ACCURACY

The contractor shall stack as follows:

Sleepers shall be offloaded from railway trucks and stacked on site in the following manner:

- a) Each layer of sleepers including the bottom layer, is to rest on two strips of timber packing, each strip having a cross-section of not less than 38 mm x 38 mm. Under no circumstances may the top layer of sleepers touch the bottom layer of sleepers.
- b) The maximum stack height permitted is 2772mm high inclusive of the brandering dimensions at each level of stacking

The sleepers shall be loaded in railway trucks in the following manner:

- a) The sleepers are to be loaded rail seats uppermost transversely in layers: each layer being placed as nearly as possible in the middle of the truck.
- b) Each layer of sleepers including the bottom layer, is to rest on two strips of timber packing, each strip having a cross-section of not less than 38 mm x 38 mm.
- c) Under no circumstances may the top layer of sleepers touch the bottom sleepers.

The number of sleepers to be loaded in each truck shall be based on the permissible load of the vehicle but rounded off to the nearest multiple of 10.

No loose concrete must be present on top of the sleepers when loaded on the wagons.

7. EVALUATION OF MACHINE PERFORMANCE

- 7.1. The Supervisor will decide (before completion of work for the day) if -stacking of sleepers shall be done in case of non-conformance to standards set out in this document. In all instances where re-stacking is required, the working time will be recorded as part of the total work time allocated to the Contractor to execute the work load.